

CHAOS, SOLITONS & FRACTALS
applications in science and engineering

VOLUME 2 CONTENTS

VOLUME 2 NUMBER 1

**M. Nakagawa, K. Kobayashi
and H. Namikata**

C. J. Griffin and G. C. Joshi

H. Leung

**P. L. Christiansen, V. Muto and
S. Rionero**

M. R. Islam

H. Miura and Y. Aizawa

I. Hoveijn

M. S. El Naschie

K. Nishimura and M. Yano

D. L. Critten

JANUARY/FEBRUARY 1992

1 An extended diffusion-limited aggregation model with repulsive and attractive interactions
11 Octonionic Julia sets
25 Experimental modeling of electromagnetic wave scattering from an ocean surface based on chaotic theory
45 Solitary wave solutions to a system of Boussinesq-like equations
51 Evolution of oscillatory and chaotic flows in mixed convection in porous media in the non-Darcy regime
73 Observation of fine structures in the Kuramoto-Sivashinsky turbulence
81 Symplectic reversible maps, tiles and chaos
91 On the uncertainty of information in quantum space-time
95 Business cycles and complex non-linear dynamics
103 Understanding fully developed turbulence: some new ideas
I Sample layout for camera-ready copy submission

VOLUME 2 NUMBER 2

J. B. Collings

Y. Yamaguchi and K. Tanikawa

MARCH/APRIL 1992

105 Nonlinear behavior of a parametrically forced temperature-dependent model for a mite predator-prey interaction
139 Structure change of stable and unstable manifolds in two-dimensional maps: period-doubling bifurcation

S. Ichinose and T. Minato	147	Dynamics of the protons in alpha-helical proteins
A. V. Holden and H. Zhang	155	Lyapunov exponent spectrum for a generalized coupled map lattice
A. L. Kovács	165	Associative hierarchy in complex processes
A. Fuliński and L. Kozarzewski	175	Chaos and inertial effects in an anharmonic oscillator
R. Artuso, G. Casati and D. L. Shepelyansky	181	Break-up of the spiral mean torus in a volume-preserving map
C. A. Sparre	191	Bifurcation and chaotic attractors for nonlinear torus-like coupled maps
J. Engelbrecht, D. Fusco and F. Oliveri	197	Nerve pulse transmission: recovery variable and rate-type effects
M. S. El Naschie	211	Multi-dimensional Cantor sets in classical and quantum mechanics
	I	Sample layout for camera-ready copy submission

VOLUME 2 NUMBER 3

MAY/JUNE 1992

A. V. Holden and Yin-Shui Fan	221	From simple to simple bursting oscillatory behaviour via chaos in the Rose–Hindmarsh model for neuronal activity
K. Konno and Y. H. Ichikawa	237	Solitons on a vortex filament with axial flow
P. S. Landa and M. G. Rosenblum	251	On possible inaccuracy in quantification of chaotic motion
S. B. Kuksin	259	An infinitesimal Liouville–Arnold theorem as a criterion of reducibility for variational Hamiltonian equations
S. Rajasekar, S. Parthasarathy and M. Lakshmanan	271	Prediction of horseshoe chaos in BVP and DVP oscillators

S. P. Kuznetsov	281	Universality and scaling in two-dimensional coupled map lattices
F. Benedettini, G. Rega and A. Salvatori	303	Prediction of bifurcations and chaos for an asymmetric elastic oscillator
H. Heng and W. Martienssen	323	Analysing the chaotic motion of a driven pendulum
A. C. J. Luo and R. P. S. Han	335	Period doubling and multifractals in 1-D iterative maps
	I	Sample layout for camera-ready copy submission

VOLUME 2 NUMBER 4

JULY/AUGUST 1992

A. V. Holden and Yinchui Fan	349	From simple to complex oscillatory behaviour via intermittent chaos in the Rose–Hindmarsh model for neuronal activity
M. L. Du	371	Fractal curves in higher-dimensional space from functional equations
A. M. Ozorio de Almeida and M. A. M. de Aguiar	377	Compact billiards in phase space
S. Roy Choudhury	393	On bifurcations and chaos in predator–prey models with delay
F. H. Willeboordse	411	Time-delayed map extension to n -dimensions
V. Zissimopoulos and G. Karagiorgos	421	Performance of a neural network method with set partitioning
M. S. El Naschie	437	A note on Heisenberg's uncertainty principle and Cantorian space-time
E. Gozzi, M. Reuter and W. D. Thacker	441	On the Toda criterion
	459	Corrigendum
	I	Sample layout for camera-ready copy submission

VOLUME 2 NUMBER 5

SEPTEMBER/OCTOBER 1992

Wei-Mou Zheng 461 Admissibility conditions for symbolic sequences of the Lozi map

R. W. Leven and D. Uhrlandt 471 Estimation of the $f(\alpha)$ spectrum from simulated and measured time series

A. C. Bryan and A. E. G. Stuart 487 On the dynamics of soliton interactions for the Korteweg-de Vries equation

H. Zhang and A. V. Holden 493 Estimation of the persistence of strain from a time series as a measure of the geometry of an attractor

D. B. Duncan and J. A. D. Wattis 505 Approximations of solitary waves on lattices using weak and variational formulations

T. Kapitaniak 519 Controlling chaotic oscillators without feedback

G. Marshall and E. Arguijo 531 Growth pattern formation driven by external fields

K. Hikami, P. P. Kulish and M. Wadati 543 Integrable spin systems with long-range interactions

E. S. Mistakidis, P. D. Panagiotopoulos and O K. Panagouli 551 Fractal surfaces and interfaces in structures. Methods and algorithms

I Sample layout for camera-ready copy submission

VOLUME 2 NUMBER 6

NOVEMBER/DECEMBER 1992

T. Iizuka and M. Wadati 575 Shallow water waves over an uneven bottom and an inhomogeneous KP equation

A. V. Holden and Yinchui Fan 583 Crisis-induced chaos in the Rose-Hindmarsh model for neuronal activity

H. Shibahara and M. Kono 597 Periodic, aperiodic and chaotic motion of drift wave vortices in a circular region

F. H. Willeboordse 609 Selection of windows, attractors and self-similar patterns in a coupled map lattice

W. Ebeling and G. Nicolis	635	Word frequency and entropy of symbolic sequences: a dynamical perspective
J. A. Gibson	651	Pole-zero analysis and synthesis of discrete system bifurcation
D. Belousek, N. Clements, L. Goodman and J. Kenny	661	Quantum automaton in a 1-D box
	I	Volume 2 Title Page, Volume Contents and Author Index
	XI	Sample layout for camera-ready copy submission

